Innovation and Development of Technical Task Force Information Services in Rural China

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Abstract

The paper discusses main methods, modes and management in innovation and development of Technical Task Force information services in rural areas since the implementation of the project of “Promoting Innovative and Sustainable Science and Technology Support to Poverty Reduction in Rural China” originated by China Ministry of Science and Technology, China Ministry of Commerce and UNDP. It also introduced the progress of an information network supported by the UNDP project which become a comprehensive platform in promoting China’s diverse rural technical extension system and TTF initiative information exchange with market-oriented structure to meet various needs of farmers, farm systems and rural communities of the country.

Keywords: agricultural technical information services, Technical Task Force, Poverty Reduction, rural development

1. Introduction of the Technical Task Force (TTF) Project

In order to alleviate poverty in the Chinese rural area, Nanping City of Fujiang Province initiated a TTF system in 1998. Since 2002, the Ministry of Science and Technology of China (MOST) together with Ministry of Commerce (MOC) and Ministry of Personnel(MOP) has conducted a pilot trial of the TTF system in some parts of the country. Different parts of the country have adopted flexible systems and made innovations in mechanism. As a result, a new avenue for extension of science and technology in the rural area as well as marketization of technical products has been developed by combining technical extension and market driven services. This has provided a new development not only for updated techniques for agroproduction in the rural area, increased farmers’ income and guidance of farmers into a market but also for the innovation of traditional technical extension and has gained good effects. In order to improve the TTF system and have it play a full role in poverty alleviation by means of science and technology and in rural development, Chinese government and United Nations Development Programme (UNDP) cosponsor a four-year project of “Promoting Innovative and Sustainable Science and Technology Support to Poverty Reduction in Rural China”(Zeng & Gao,2006).

Objectives of the Project are to find an effective way for the marketization of agricultural science and technology, to increase the capacity of farmer households’ technical demand-oriented agricultural technical service, to increase the innovated service capacity of agro-technical extension agencies, and to bring into full play of a role of agro-technical support in marketized agricultural process. On the basis of the trial, the implementation experiences of
the project are summarized and further standardized step by step for spreading the application of the TTF system and establishing a mechanism for its long-term effects.

2. Implementation of the Project

The project selected 15 provinces including Fujian, Zhejiang, Shandong, Tianjin, Heilongjiang, Guangxi, Hubei, Jiangxi, Ningxia, Tibet, Xingjiang, Inner Mongolia, Hainan, Chongqing and Yunnan as its experimental sites. The major contents of the Project are 1) to propose suggestions for policy making, to improve technical extension service in the rural area, to improve farmers’ living standards, to promote poverty alleviation, and to strengthen the construction and implementation of the TTF system at different levels; 2) to conduct pilot trials of different mechanisms for poverty alleviation with the support of the TTF and to offer workshops for TTF and farmers on global and local knowledge; 3) to advocate and extend the TTF system on the basis of policy suggestions, experience and lessons gained from the pilot trial of the TTF system, and the institutional arrangement in the rural area and the development of market activities.

Since initiation of the project by MOST, MOC and MOP, local governments at all levels and all social sectors have given energetical support and active promotion, and made notable progresses. After 6 years practices, the TTF system has achieved significant outcomes. Firstly, it created a sound environment and made management policies at different levels for the TTF system so as to improve the service quality of technical extension in the rural area. It improved farmers’ living standards and promoted poverty reduction. It established a management system for the operation of the TTF system at the national, provincial, city/county, and township level. Secondly, the TTF system has gained experience and lessons from its pilot trial, the institutional arrangement in the rural area and the development of market activities. Thirdly, TTF system is established to improve "farmers income, rural development and agricultural efficiency" through market driven mechanism. The soul of the system of TTF is the interest community, its driving force is profit mechanism. So an innovative mechanism for agricultural technology extension by TTF system have been initiated including the two way selection of TTF according to farmers’ needs and TTF interest, and ‘benefit and risk sharing’. Such profit-binding mechanism satisfied farmers’ needs and the supply and demand of TTF services can be completed. TTF have been strongly encouraged to become shareholders in technology share, lease management, technology contracting, and so on. Fourthly, It also set up different modes in accordance with local practices like “TTF + farm households + enterprise”, “TTF + farm households + associations” “TTF + demonstration bases + farm households” etc to enhance effectiveness of TTF services. For an example, in Ningxia Hui Autonomous Region, the TTF initiative has made fruitful progress after 3 years development. The ‘Ningxia mode’ mainly means “relying on scientific and technical projects, giving priority to carve out, innovating system, paying attention to finance and persisting in market oriented”(Cheng,2008). TTF system has promoted development of productive technology in poor rural areas and found a new mode of making profits and established a mechanism of economic growth in the countryside. Fifthly, the comprehensive on the spot surveys were conducted for improving the TTF system development. The results showed that TTF system was welcome by local government and farmers. For an instance, the implementation of TTF system in the poverty-stricken mountainous area of north Fujian province have led to a thrive of the exploitation of resources and markets. The local farmers’ income and efficiency increased faster with technology, TTF is welcomed by the majority of farmers. It is a successful experience for the development of the rural economy in the west areas.
After being authorized by local governments, provincial and county level TTF management offices or guidance teams set up for appointing TTF experimental unit work. Thousands of TTF were separately dispatched to experimental unit towns, counties and demonstration bases to start their services of science and technology. Now, there are 50,000 TTF members at present and is expected to expand to 100,000 in 2008 will be dispatched to the frontline of agricultural production to serve local farmers. Other services like the technology emergency hotline for agriculture (the 110 hotline), and the television broadcasting network and etc also provided at the same time. Growing from the practice of grass root, TTF becomes a "seeder" to introduce technical knowledge, create demonstration bases, set up platform for training courses and plays a role of "incubator" in transforming the new technologies and varieties(TTF, 2008).

TTF system organizational structure and operation system comprise of TTF administrative system and operation system of market-oriented. TTF administrative system formed by TTF management offices at all levels which consists of leaders from local departments of Science and technology, personnel, organization, and etc. It is responsible for science and technology policy and planning, overall coordination, and supervision and inspection management. The market driven operation system established according to local agricultural products marketing industry chains, possible corporations with other enterprises and market opportunities. TTF associations at various levels is the trade association for TTF, with characters of self discipline, communication, learning, mutual aid, etc. Such beneficial community is ground base for both TTF and farmers.

3. Services provided by TTF in rural areas of China
3.1 Agricultural technical services

In line with the Government's long-term development goal in building an all-round Xiaokang (well-off) Society by applying scientific development approaches, the project is aimed at reducing poverty in rural areas, by empowering farmers with appropriate technologies and skills to promote agricultural efficiency and increase farmers’ income through TTF initiative. The contracted TTF offered technical services by entering farm households, living, working, and sharing benefit and risk with farmers, provided various training and guiding materials at any time farmers need them. In this way, the TTF services further promoted the reform of China's rural economy and rural technological application system, set up a new approach for technical personnel to participate more effectively in helping farmers to decrease poverty and serve the sustainable development of agriculture, countryside and farmers, and contribute to building China's new socialist countryside. For an example, in 2008, Wu Lanchabu city in Inner Mongolia Autonomous Region appointed more than 1,000 TTF at city, county and town levels. Surrounding dominant industries in farming and animal husbandry, they set up 97 various science and technology service groups, contracted 164 projects, and over 800 villages of 11 counties/districts have developed science and technology services. They also have distributed 166,000 pieces of fertilizer recommendations cards, popularized fertilizer formula of 364 mu, helped farmers and herdsmen to introduce over 50 new varieties, popularized over 40 new technologies and new products, held 500 training classes, trained over 180,000 farmers and herdsmen and distributed 150,000 technical materials(Inner Mongolia,2008). TTF initiative made remarkable achievements and contribution to the construction of rural Sci-tech service system and rural economic development. Protecting the farmers’ interests has been our goals in agricultural science and technology services.
3.2 Exchange activities of experiences and technologies

Several conferences and symposiums of national TTF system initiative were organized for the TTF community to exchange ideas, technologies and experiences in providing better services in rural areas. the “International Symposium on the construction of Information Platform for Technology Poverty Alleviation Innovation and Sustainable Development in Chinese Rural Area” was held in Beihai, Guangxi Autonomous Region in Feb.2008. The symposium was held jointly by UNDP, China International Center for Economic and Technical Exchanges (CICETE), MOC, and China Rural Technology Development Center (CRTDC), MOST(Guangxi,2008). Attendants were agricultural experts and scholars from China, the United States, Bangladesh, Rwanda, UNDP, other international organizations in China, and international famous IT companies. 150 representatives of technologists and management staffs from 15 project areas also attended the meeting. Participants made active and constructive academic discussions on the issues of TTF system, poverty alleviation innovation, the position and role of information platform in improving the technology service system in base areas, the challenges, international experiences, and the functions of enterprises and non official organizations in the process of informationalization. Video meeting platform was used for discussion with experts in African countries about development and strategies. Other exchange activities like inter province and county personnel visiting, cooperative researches, and united key problem solving etc have been also conducted. Training courses at various levels have been implemented to teach the farmers, technicians and managers necessary knowledges in agricultural production, inspire enthusiasm of farmers, TTF and local government to benefit all of them, make them clear the policy and measures of TTF system and distribute advanced techniques with prominent effects. These activities provided a forum for exchange of valuable ideas and advice in improving TTF system, the implementation of UNDP project, and the poverty alleviation undertaking.

3.3 Construction of TTF information network

A bilingual website of “China TTF International Cooperation Network”(CTTF) was launched in Feb. 2008 to provide technical and management information of TTF systems and achievements in serving efficiently agriculture, countryside and farmers, which is under the National Project Management Office of MOST. The website linked provincial and county level TTF websites as well as other related websites. The construction of CTTF is an important part of the project of “Promoting Innovative and Sustainable Science and Technology Support to Poverty Reduction in Rural China”. The CTTF main columns includes Leader’s Speeches, including speeches by the State Counsler, ministers and other leaders at the national conferences of TTF experimental initiative. Policy & Regulations, providing TTF related policies and regulations of TTF management offices from various levels. Experience Exchange, offering experience information in TTF project implementation in each province, like “Active approaches on working mechanism of enterprise scientific and technical innovation driven by TTF in Zhungeerqi, Inner Mongolia, (June 20,2007)”, “Qinghai TTF realized ‘double winning’ at grassroot innovation (April 30,2007)”. Survey Reports, giving TTF survey results of investigation groups as “Tracking survey report of TTF system work in Aksu city, Xinjiang Autonomous Region (Sept 6,2007)” etc. TTF Highlights, providing news reports of TTF activities such as “Leading person of inspiring agriculture by science and technology, record for Luo Dengfeng, TTF from Renhuai city, Guizhou province(Aug 31,2007)”, “Pear farmer’s evangal, record for Tuohuti ahemuli,
excellent TTF from Kuerle city, Xinjiang autonomous region (July 25, 2007), “Honey brewing person: Xiao Changyuan, Suichuan county, Jiangxi province (Aug 4, 2006). The website also provided TTF Database, introducing TTF professional formation. Farmers Benefits offering feedbacks from farmers about their benefit gained from TTF initiative and services and Links providing information of related websites (See Figure 1 & 2).

Fig. 1. Home page of CTTF website

Fig. 2. Web page of experience exchange

The website are welcome by TTF, farmers and managers for its timely information dissemination and supply. The web consists of two parts, the web pages management system and data control system. The construction of website are responsible by the website working
team which has been in charge of collecting data from each TTF experiential provinces and counties, processing, translating and distributing the information on the web. The web has enhanced TTF ability to exchange more information within TTF community and lead the farmers by their practical operation to become wealthy. It increased the development of TTF system and informationization in the countryside.

4. Conclusion

TTF system derives from the needs of the masses and exploration of grass roots and practical innovation. It formed spontaneously and became a major carrier in rural areas. The notable effects of TTF experimental work has fully demonstrated. As local leaders and farmers said that TTF system is an effective measure to solve problems in agriculture, countryside and farmers in new period and a new breakthrough in reform and innovation of agricultural technology extension. The TTF system has promoted China rural development, brought along changes of rural production relations and become a new approach for further liberating rural productivity. Since China has vast territory differences, TTF should persist in innovation and adjusting various modes and mechanisms to promote rural economic and social development. The TTF initiative has far reaching significance in rural poverty alleviation and will push forward the construction of new socialist countryside in China.

References

Inner Mongolia. 2008. Thousands of TTF in Wu Lanchabu city of Inner Mongolia Autonomous Region were active in the frontline of agriculture and animal husbandry production.